civilisation. "Give us the young, and we will create a new mind and a new earth in a single generation."

Mr. Kidd died in 1916, and we do not know to what extent he was able to revise what is now published in this book. We must say that we find in it what seem to us examples of exaggeration, false antithesis, and simplicist formulation; nevertheless, it is a rousing book of unmistakable sincerity and earnestness of conviction.

FORESTRY IN CORSICA, ALGERIA, AND TUNISIA.

French Forests and Forestry: Tunisia, Algeria, Corsica. With a Translation of the Algerian Code of 1903. By T. S. Woolsey, jun. Pp. xv+238. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1917.) Price 11*s.* 6*d.* net.

THIS book is provided with a somewhat misleading title, so that the reader expects a description of forests and forestry practice in France; whereas the three dependencies of Corsica, Algeria, and Tunisia are dealt with. The author, who was formerly a forest officer in the United States, visited these three countries and studied them as an expert. His detailed description of the distribution, management, administration, and protection of the forests may be regarded as authoritative. His remarks on sylvicultural methods are of great interest, especially to foresters in the United States and in our own Colonies, where the climatic conditions are often similar to those in the countries here described.

In Tunisia, with 1,600,000 acres of forests, the sole trees of commercial importance are the cork oak, producing cork, and the Zeen oak (*Quercus mirbeckii*), akin to our own species and yielding an excellent timber. The annual receipts of these forests vary from 24,000*l.* to 53,000*l.* The most notable technical achievements of the French foresters in Tunisia have been the protection of the oases in the Djerid and the control of the dunes at Bizerta and Cap Bon. The oasis is usually not a mere spring, but in reality a rich date-palm farm several hundred acres in area and well worth the cost of protection against drifting sand, excessive grazing, and erosion. The descriptions of the ways in which sand fences are built and of the various methods of coping with erosion are interesting. Plantations have not been successful, as the annual rainfall is only a few centimetres, and the species to be grown must, besides, withstand the burning siroccos which blow during summer. The tamarisk has succeeded, but only in a partial degree.

In Algeria there are 7,000,000 acres of forests, which mainly exist on land too poor to be cultivated by the natives. The Government controls 4,800,000 acres, which yielded in 1910 a gross revenue of 150,000*l.* Cork oak contributes the greater part of this total. Cedar, the most remarkable species, yields a small quantity of good timber annually. The Aleppo pine, which covers an immense area estimated at 1,500,000 acres, yielded no revenue until lately. Recent experiments show that it can be tapped for turpentine with some commercial success. The principal methods of regeneration are described, and as a rule sowing in carefully prepared spots is more successful than the planting out of seedlings.

Corsica, with a total area of 2,155,161 acres, has 431,000 acres of so-called forests, of which, however, only 347,000 acres are stocked with trees. The most important species is the Corsican pine, which attains a height of 150 ft. and yields a valuable timber. Its growth is vigorous up to 150 years old. It has been tapped for resin, but the tapping killed many mature trees or considerably slowed their growth. The Corsican pine is now worked on a modification of the selection system by which the trees to be felled are selected in groups. The small openings thus made in the stand give all the light necessary for the development of the seedlings. The areas felled, scattered irregularly over the forest, vary in size from one-tenth to one-fourteenth of an acre. The Corsican peasants are still a lawless set, and very difficult to control. Fire, excessive grazing by goats, trespass, and minor thefts are common; and the actions at law brought by the forest officers, whilst decreasing year by year, are still very numerous. Of 598 actions brought in 1911, no fewer than 314 ended in acquittal by complacent juries. The book concludes with an appendix, being a translation of the Algerian forest code, followed by statistics of Corsica and the clauses usual in a sale of timber in a communal forest.

THE DEVELOPMENT OF SURGERY.

The Edinburgh School of Surgery before Lister. By Alexander Miles. Pp. viii+220. (London: A. and C. Black, Ltd., 1918.) Price 5*s.* net.

THE author, who is one of the surgeons to the Royal Infirmary of Edinburgh, has compressed into 220 pages a great deal of interesting matter concerning the development of surgery in the northern capital from 1505 down to the period preceding Lister. The origin of this famous school may be said to date from the "seil of cause granted be the Towne Counsell of Edinburgh to the Craftes of Surrengenry and Barbouris" whereby they received permission to dissect one condemned criminal each year "quairthrow we may heif experience, ilk ane to instruct utheris." The principles here laid down to base surgery on anatomy and to teach the same pervades the whole history of the Edinburgh school down to the period of Syme, its greatest representative in the middle of last century.

At first the barbers were eliminated from the

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surgical craft, which continued for a long period outside the University walls, until in 1726 the University itself established a chair of anatomy, which was first occupied by the race of the Monros, father, son, and grandson. The history of the connection of the Bell family, Benjamin, John, and Sir Charles, is well described, and their creation of a great following, numbering among the flock the representative names of Sir William Fergusson, Robert Liston, and James Syme, a galaxy of practical surgeons of which any medical school might be proud. Lister migrated in early life from University College, London, to become a pupil of Syme, with whom he became intimately associated before returning to London.

It is clearly to be made out in Mr. Miles's book that the path to surgical fame and fortune in Edinburgh was by way of the dissecting-room, and in the pre-anæsthetic times, when rapidity of operation was the order of the day, a very exact knowledge of anatomy was essential. The introduction of anæsthetics altered this, however, although for many years to come surgeons all over the country learned their art as dissectors, and the eminence of our surgeons as practical craftsmen may be referred to this early training in manipulative skill. At the same time, however, English surgery as a science was in a backward state, and there is considerable ground for the belief that part of Lister's great work was due to his training as a pathologist rather than as an anatomist. He became familiar with pathological doctrines and the bacteriology which was then rapidly coming to the front, and most successfully applied the knowledge to the problems of disease which confronted him. In this way he laid the foundations for enormous advances, although he departed from the Edinburgh anatomical traditions.

In comparison with expert craftsmen like Liston, Fergusson, and Syme, Lister was not a brilliant and dashing operator, although his final results have possibly never been surpassed. Under his magic hand the terrors of sepsis disappeared and a new era in medicine was revealed. The preparatory training which Lister went through was not imitated by others to any great extent for a long time, and the great discoveries of bacteriology passed into the hands of pathologists. This must seem strange when it is remembered that the great majority of cases which a surgeon is called upon to treat are the direct or indirect results of infection. The technical developments of operative surgery have tended more and more to make the surgeon an operative craftsman rather than an original investigator. The relative failure of pure surgery apart from science in the present war is a confirmation of this.

As a study of the evolution of operative surgery in Edinburgh Mr. Miles's book is a welcome addition to our knowledge, however. There still is a necessity for a work on the evolution of ideas on surgical diseases as opposed to manipulative skill in their treatment.

OUR BOOKSHELF.

Frontiers: a Study in Political Geography. By C. B. Fawcett. Pp. 107. (Oxford: At the Clarendon Press, 1918.) Price 3*s*. net.

IT would not be easy to say much that is new in a general discussion on frontiers after the works of Sir Thomas Holdich and Prof. L. W. Lyde, one arguing that frontiers should secure protection to the State, the other that they should be chosen rather to facilitate intercourse in the hope of securing peace between adjacent States. Mr. Fawcett has, however, written a very readable essay treating the subject from the viewpoint of geographical evolution. He begins by discussing the value that various features have as frontier zones, and leads on to a consideration of the complexities of the frontiers of modern States. He notes that the strongest force at present working towards the modification of frontiers is a tendency towards the coalescence of national and political boundaries. This implies a subordinate place to economic and strategic considerations, though in the main such frontiers will conform with the latter. The real difficulties arise in the determination of nationality in frontier lands which are well peopled. We are glad to notice that Mr. Fawcett defines his use of the terms "frontier" and "boundary," employing the former for an area and the latter for a line. Loose usage of these terms is not conducive to clear thinking. His suggestion to speak of zones of separation and zones of intercourse (or of pressure), instead of natural and artificial frontiers, has much in its favour. Among his wealth of instances we find no mention of the neutral zone established in the south between Norway and Sweden in 1905. Here is an instance of a frontier of intercourse (short compared with the long zone of separation) which both nations agree to prevent so far as possible developing into a menace to one another, by prohibiting the erection of military works or the establishment of garrisons.

R. N. R. B.

Story-lives of Men of Science. By F. J. Rowbotham. With portraits and other illustrations. Pp. 266. (London: Wells Gardner, Darton, and Co., Ltd., n.d.) Price 3*s*. 6*d*.

THESE attractively written biographies of some seventeen workers in science will interest young readers, and probably indirectly foster a love of natural knowledge among them. Among the heroes of science chosen by the biographer may be mentioned Galileo, Newton, Davy, Faraday, Darwin, Pasteur, Kelvin, Lister, and Crookes. The chapters are full of incident, and deal with the domestic lives as well as with the researches of the great men chosen for inclusion in the volume. Mr. Rowbotham shows a wide acquaintance with the literature of his subject, and possesses a happy style. It is unfortunate that throughout the chapter on Lord Kelvin "Thompson" is printed instead of "Thomson," and that Francis Bacon appears in the table of contents as Lord Bacon, instead of Lord Verulam.

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